ABSTRACT OF DISCLOSURE

A scrambler and scrambling method. The scrambler has a random data generator which generates random data having a random data generation cycle based on a result obtained by multiplying at least a size of a first data frame by a result obtained by dividing a data amount of two tracks in an outermost circumference of an optical disc by a size of a second data frame. The scrambler is advantageous in generating a stable servo signal and suppressing a DC component in modulation in a high density disc system using the optical disc.